

- al*
- Sub C1*
- a) from 5 to 50% by weight of ethylene,
  - b) from 20 to 80% by weight of at least one vinyl ester selected from the group consisting of vinyl esters of unbranched or branched carboxylic acids having 1 to 9 carbon atoms whose homopolymers have a glass transition temperature  $T_g > 0^\circ\text{C}$ ,
  - c) from 5 to 70% by weight of at least one vinyl ester selected from the group consisting of a vinyl ester of a branched carboxylic acids having 8 to 13 carbon atoms whose homopolymers have a glass transition temperature  $T_g < 0^\circ\text{C}$ ,
  - d) from 0.5 to 10% by weight of at least one ethylenically unsaturated monocarboxylic or dicarboxylic acid having 3 or 4 carbon atoms,
  - e) from 0 to 10% by weight of at least one ethylenically unsaturated, hydroxyalkyl-functional comonomer,
  - f) from 0 to 10% by weight of a further mono- or polyethylenically unsaturated comonomer,

the % by weight being based in each case on the overall weight of the comonomers and adding up to 100% by weight, and the dispersion obtained therewith being dried if desired, wherein said vinyl ester-ethylene copolymers are free of moieties derived from (meth)acrylate alkyl esters.

2. The low-emission adhesive as claimed in claim 1, wherein vinyl esters b) copolymerized are at least one member selected from the group consisting of vinyl acetate, vinyl propionate, vinyl butyrate, 1-methylvinyl acetate, vinyl pivalate, and vinyl esters of  $\alpha$ -branched monocarboxylic acids having 9 carbon atoms.

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Kindly add new claims 11-17 as follow.

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11. (New) The vinyl ester-ethylene copolymer of claim 1 having free carboxylic acid groups derived from (meth)acrylic acid.

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GR 12. (New) A low-emission adhesive based on an aqueous, protective-colloid-free polymer dispersion or water-redispersible dispersion powders, obtainable therefrom, of vinyl [acetate] ester-ethylene copolymers containing free carboxylic acid groups, obtainable by free-radically initiated emulsion polymerization, in aqueous medium and in the presence of at least one emulsifier, of a comonomer mixture comprising

- Sub C17
- a) from 10 to 40 weight percent ethylene;
  - b) from 35 to 70 weight percent vinyl acetate;
  - c) from 10 to 45% of one or more vinyl esters of C<sub>10-11</sub> carboxylic acids having a Tg in their homopolymers of 0°C;
  - d) from 2-6 weight percent of at least one of methacrylic acid or acrylic acid,

the % by weight being based in each case on the overall weight of the comonomers and adding up to 100% by weight, and the dispersion obtained therewith being dried if desired, wherein said vinyl ester-ethylene copolymers are free of moieties derived from (meth)acrylate alkyl esters.

13. (New) A low-emission adhesive based on an aqueous, protective-colloid-free polymer dispersion or water-redispersible dispersion powders, obtainable therefrom, of vinyl ester-ethylene copolymers, obtainable by free-radically initiated emulsion polymerization, in aqueous medium and in the presence of at least one emulsifier, of a comonomer mixture consisting essentially of

- a) from 5 to 50% by weight of ethylene,
- b) from 20 to 80% by weight of at least one vinyl ester selected from the group consisting of vinyl esters of unbranched or branched carboxylic acids having 1 to 9 carbon atoms whose homopolymers have a glass transition temperature  $T_g > 0^\circ\text{C}$ ,
- c) from 5 to 70% by weight of at least one vinyl ester selected from the group consisting of a vinyl ester of a branched carboxylic acids having 8 to 13 carbon atoms whose homopolymers have a glass transition temperature  $T_g < 0^\circ\text{C}$ ,
- d) from 0.5 to 10% by weight of at least one ethylenically unsaturated monocarboxylic or dicarboxylic acid having 3 or 4 carbon atoms,

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e) from 0 to 10% by weight of at least one ethylenically unsaturated, hydroxyalkyl-functional comonomer.

f) from 0 to 10% by weight of a further mono- or polyethylenically unsaturated comonomer,

the % by weight being based in each case on the overall weight of the comonomers and adding up to 100% by weight, and the dispersion obtained therewith being dried if desired wherein said vinyl ester-ethylene copolymers are free of moieties derived from (meth)acrylate alkyl esters.

Sub B47

14. (New) The vinyl ester polymer of claim 13, wherein said vinyl ester whose homopolymers have a glass transition temperature  $T_g > 0^\circ\text{C}$  are selected from the group consisting of vinyl acetate, vinyl propionate, vinyl butyrate, and mixtures thereof.

15. (New) The vinyl ester of claim 13, wherein said vinyl ester whose homopolymers have a glass transition temperature  $T_g < 0^\circ\text{C}$  are selected from the group consisting of vinyl esters of 2-ethylhexanoic acid, lauric acid,  $\alpha$ -branched monocarboxylic acids having 10 or 11 carbon atoms and vinyl esters of branched monocarboxylic acids having 10-13 carbon atoms, and mixtures thereof.

16. (New) The vinyl ester of claim 14, wherein said vinyl ester whose homopolymers have a glass transition temperature  $T_g < 0^\circ\text{C}$  are selected from the group consisting of vinyl esters of 2-ethylhexanoic acid, lauric acid,  $\alpha$ -branched monocarboxylic acids having 10 or 11 carbon atoms and vinyl esters of branched monocarboxylic acids having 10-13 carbon atoms, and mixtures thereof.

17. The vinyl ester-ethylene copolymers of claim 1 which are dried to form a redispersible powder following their preparation without any intervening treatment.